

NASA EXCEPTIONAL ACHIEVEMENT MEDAL

The NASA Exceptional Achievement Medal is awarded for a significant, specific accomplishment or contribution clearly characterized by a substantial and significant improvement in operations, efficiency, service, financial savings, science or technology which contributes to the mission of NASA.

Tracy Lee Crittenden
Richard Martucci
Richard A. Boutin
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Ramon Lugo, III
Shannon D. Bartell
Lawrence F. Kruse

George R. Hurt
Gary Ray
Walter L. Covington
Janet M. Parker
Barbra Reitz
Steve Dutczak
Theodore Cook, Jr.

NASA EXCEPTIONAL SERVICE MEDAL

The NASA Exceptional Service Medal is awarded for significant performance characterized by unusual initiative or creative ability that clearly demonstrates substantial improvements or contributions in engineering, aeronautics, space flight, administration, support, or space-related endeavors which contribute to the mission of NASA.

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Sam Lenck
Dudley R. Cannon, Jr.
Rita Willcoxon
Russell Romanella
Mike Kinnan
Roelof L. Schuiling
Lesa Roe
Wayne Prince
Charlie Quincy
Tammy Conway

Ronald B. Kent
Daniel L. Tweed
Roy L. Russell
Gale J. Allen
G. Wyckliffe Hoffler, M.D.
Andrew L. Haugevik
Joel R. Reynolds
Bruce R. Baker
Edward J. Mango
Perry L. Becker
Barry M. Braden



KSC CENTER DIRECTOR Jay Honeycutt leads a panel of NASA center directors during the closing segment of the 33rd Space Congress on April 26 at the Howard Johnson Plaza-Hotel in Cocoa Beach. The leaders spoke on "A Perspective of the Future from NASA Center Directors." From the left are Mark Craig, deputy director at Stennis Space Center; Dr. Wayne Little, director at Marshall Space Flight Center; Honeycutt, George Abbey, director of Johnson Space Center; and John Young, associate director (technical) of Johnson Space Center.

KARS offers discount attraction tickets

KARS is offering discounted tickets that can be used at Wet 'N Wild water park on Saturday, May 25. The special price is \$13 (the regular rate is \$25.39) and includes: free soft drinks from noon to 8 p.m.; free 18-hole Congo Golf from noon to 5 p.m.; regular hot dogs for 75 cents at the main snack bar; \$1 tube rentals after 6 p.m. (\$2.50 before 6 p.m.); and \$1.00 parking with a parking coupon. Admission is

good anytime after 10 a.m. KARS/KSC will have exclusive use of the park from 6 to 10 p.m. The rain check policy will be in effect for those entering the park after 4 p.m. Tickets will be on sale at all NASA Exchange retail stores from May 17-24.

A special rate has also been arranged with Universal Studios for the month of September. Ticket prices will be \$23 for adults and \$18 for children.



RECIPIENTS of the team award for fighting Foreign Object Debris (FOD) are Shuttle Landing Facility team members, from the left, Manager Robert Bryan, John Forzetting, Tamara Williams, William Lockwood, Sarah Patterson, Alvin Lightsey, Donald Linton, Kenneth Hooks and Ronald Feile, all from EG&G Florida, Inc. Not pictured are Terry Mann and Larry Parker of EG&G and Ed Taff of NASA.



PARTICIPANTS in Kennedy Space Center's Spring 1996 Intercenter Run make their way down the Shuttle Landing Facility runway April 17. Weather was nearly perfect and logistically the race went off without a hitch, reports Mary Kirkland, coordinator of the event. A total of 242 runners and walkers took part 2 mile, 5 kilometer and 10 kilometer events. Winners included: Two-mile, men: Ermin Dion Ramiscal, 14:40; Raymond E. Johnson, 15:15; Dominic Lapinta, 15:17. Women, Donna Boone, 14:49; Carmel Shearer, 15:50; Rebecca Smith, 16:44. 5K, men: Rick Simon, 20:12; Jimmy Juel, 20:37; David Demianovich, 21:06. Women, Leslie Hughes, 23:32; Andi Bernhard, 24:32; Nancy Zeitlin, 24:40. 10K, men: Tim O'Brien, 37:55; Chip Galliano, 39:13; Frank Kapr, 39:56. Women, Michelle Lackore, 43:36; Cheryl Mackowiak, 52:10.

KSC employees commended at STS-76 Honoree Event



Kennedy Space Center (KSC) honored 49 of its civil service and contractor employees at a special Honoree

Event held March 19-22 at the space center.

The KSC employees were among some 250 NASA and industry employees from around the country who were honored by top NASA and industry leaders for their significant contributions to the nation's space program.

The KSC employees attended a special reception in their honor, and were joined by astronauts and senior NASA and industry officials of the Space Shuttle team.

They were given a VIP tour of Kennedy Space Center and participated in various briefings.

They also watched the STS-76 launch of the Space Shuttle Atlantis on March 22 from a special VIP viewing site.

The Honoree Award is the highest form of recognition bestowed upon an employee by the NASA Space Flight Awareness Program.

Recipients are selected for their professional dedication and outstanding achievement in support of the human space-flight program.

Twelve civil service employees were honored. They were Kent Hawley, David Cox, Tricia Koger, Sharon Pine, Beth Vrioni, Robert Koning, Mark Rosato, Teresa Lawhorn, Michael Lonergan, Timothy Bond, James Devault and Thomas Howard.

Contractor employees honored included William Cook, The Bionetics Corp.; James Meeks, I-NET Inc.; Roger Greek Jr., Mark Juhr, Margie Myers, and William McCullough, McDonnell Douglas Space and Defense Systems-KSC; Kelly Geroux, Rockwell Aerospace, Rocketdyne; and Paul Hamric, Wiltech Corp.

Also, Frederick Martin, Catherine Parnell and Kenneth Saltz, Rockwell Aerospace,

Space Systems Division; Stephanie Grathwol, ABEX NWL Aerospace; John Jahahn, Odetics; Gary Henderson, Pamela Storm and Steven Van Horn, United Technologies, USBI Co.; and Rosalind Barbaree, Richard Bennett, Cecil Boggs Jr., Dolores Galbreath and Mary Ann Jackson, EG&G Florida Inc.; and Evelyn Ott and Gordon Rogers Sr., United Service Associates Inc.

Lockheed Martin Space Operations employees honored were Peter Aiello, Frederick Cryder, Stephen Dupree, Benjamin Enriquez, Peter Kent, Dennis Knight, Debra Lamond, Roger Lee, Paul Lucas, Louis Marrero, Henry May, Robert Parsons, Judith Russell and Christopher Sally.

STS-76 honorees and their spouses/guests visited the Johnson Space Center in Houston May 1st and 2nd as part of the Space Flight Awareness activities. There they toured facilities including Mission Control and space station and Shuttle mockups.

Silver Snoopy awards

Several Silver Snoopy awards have also been presented to NASA and contractor employees during the past month.

On April 2, members of the STS-75 crew presented awards to NASA employees Jim Thompson, Troy Turbyville and Larry Mauk and contractor employees Kim Osgood, EG&G; Titus Freeman, Sherikon Space Systems Inc.; and Richard Risley and Paul Hudson, LMSO.

Astronaut Pam Melroy presented awards April 4 to John Lorch, NASA; Bob Wilson and Pete Hopman, LMSO; and Ed Gillenwater, Ron Feile, Bill Caffee and Mike Mann, EG&G.

Astronaut Jim Halsell presented awards to EG&G employees Richard Hardy and Jeff Peterson April 10 and civil servant John Dollberg on April 16.

On April 25, Astronauts Mike Gernhardt and Mike Anderson presented awards to Cheryl Hurst, NASA; Brain Lawson, MDS&DS; Edward Simmons, Rockwell; and Bruce Rutledge, USBI.

Smithsonian, life scientists study CO2 effects at KSC site

Researchers from the Smithsonian Institution hope their experiment in a local scrub oak community at the Kennedy Space Center (KSC) will help them determine the effects of increased carbon dioxide (CO₂) on natural vegetation.

Experts forecast a doubling of the CO₂ in the Earth's atmosphere during the next century. The research team plans to simulate that increase to find out how natural ecosystems and vegetation will respond.

The Smithsonian, NASA, and the Department of Energy (DOE) are cooperating to find answers to these questions. The Smithsonian will lead the investigation with on-site assistance from KSC's life science organization. The Department of Energy provided \$1.3 million for the three-year project through a grant to the Smithsonian. One



DR. BERT DRAKE, the Smithsonian's principal investigator on the study of CO₂ levels in a KSC scrub oak community, issues a command to turn on the blowers dispersing ambient air and increased CO₂ into open-top chambers. Dr. Ross Hinkle, biological programs manager for Dynamac, awaits the start of the experiment.

year has been spent preparing the 4-acre site, located a half mile north of KSC's Launch Complex-39. The site contains 16 open-top chambers that house the Florida scrub vegetation being studied.

The 12-foot by 12-foot chambers been carefully placed over a new growth of scrub that is springing back after a planned burn of the area. Twice the normal amount of CO₂ will be blown into half of the chambers,

through an electrically powered duct system. Underground cameras will monitor root growth and researchers will watch the growth and physiology of the plants over the next two years.

The experiment should help determine if an increase in CO₂ will help vegetation grow in nutrient poor areas, said Dr. Bert Drake, the Smithsonian's principal investigator on this project.

"The study may also show that some vegetation types are more amenable to extra CO₂ and that those will flourish and develop a competitive advantage over others," said Dr. Ross Hinkle, biological programs manager for Dynamac, KSC's life science contractor. NASA's Biological Programs organization views the project as an opportunity to share data and expertise.

Chuck Henschel remembered by Apollo co-workers

Charles "Chuck" Henschel, known by many at Kennedy Space Center for his good nature and grace under pressure, died at his home in Titusville on May 2.

Henschel worked at KSC for 30 years before retiring in 1994. He joined NASA in 1964 as a test conductor and was a lead test supervisor for the first Saturn V launch from Complex 39. He worked as a launch vehicle test conductor for the Apollo program, test supervisor for the Saturn V program, NASA test supervisor for the Shuttle program and as a technical assistant for the Vehicle Processing Division.

Angelo Taiani, a NASA/KSC retiree who worked as a technical support supervisor while Henschel served as Apollo test supervisor, remembered Henschel's careful command while on console.

"He never had any irritating words to say," Taiani said. "Some people on console were much different than he was."

Dick Young, who worked as a public information officer at that time, said Henschel was "very smart" and "very affable."

"When he'd issue status reports he'd put it in English for us dummies," Young said.

Henschel took on a wide range



HENSCHEL

of responsibility as he moved into the Shuttle program, from helping former Launch Director Norm Carlson coordinate the traditional post-launch beans to serving as a back-up in the firing room during launch to preparing the Launch Complex 39 area for the center's annual open house.

"He always had a lot of projects going," said Ted Mosteller, an astronaut support office employee who trained under Henschel in the Vehicle Processing Division from late 1993 until Henschel's 1994 retirement. Those projects extended to his church and into the community, he said. "After he retired he said he didn't know how he had found time to work," Mosteller said. Recently Henschel worked as a volunteer for the Public Affairs Office and served as a consultant for the Apollo Saturn V center and shows currently under construction.

Henschel is survived by his wife, two sons, his mother and a sister. Flags at KSC were flown at half-mast May 6 in his memory.

tems to her bachelor's degree in electrical engineering and her master's in management.

Higginbotham was recently promoted to the lead orbiter project engineer position for the Shuttle Columbia after two years as an orbiter project engineer for the Shuttle Atlantis.

She engages in numerous public speaking engagements, conducts tours on behalf of NASA and tutors at a local elementary school. She has received a NASA Exceptional Service Medal and the Outstanding Woman of the Year Award.

Kay Hire, formerly an engineer with Lockheed Space Operations Company, became the first KSC employee to be named a candidate in December 1994.

STS-77...

(Continued from Page 1)

than six minutes to inflate to about the size of a tennis court. Fully inflated by nitrogen gas, the lens-shaped antenna will have a diameter of 48 feet (14.6 meters) and include three 92-foot-long (28-meter-long) struts. The orbiter will be about 400 feet (122 meters) away as the crew photographs the inflation. The IAE will be jettisoned after a 90-minute test of the deployment (i.e., inflation) and performance of a large inflatable antenna on orbit. The RMS robotic arm will then be used to retrieve the Spartan carrier the following day.

Inflatable components like the antenna could significantly reduce the cost, while increasing the reliability, of deployable structures in space such as solar arrays.

The three other rendezvous operations scheduled during the mission are with a small satellite used in one of the four TEAMS experiments called the Passive Aerodynamically-Stabilized Magnetically-Damped Satellite (PAMS). The investigation is designed to demonstrate the principle of using the thin atmosphere remaining at low altitude to position a satellite in a specific orientation. In addition, magnetized rods will be used to help align the satellite with the magnetic field of Earth. Endeavour is expected to rendezvous with the approximately

2-foot-long (0.6-meter-long) satellite on the day of deployment, Flight Day 4, as well as on Flight Days 7 and 8.

Aerodynamic stabilization could result in the design of satellites which are more reliable and cost-effective, and less complicated.

The highest-priority experiment of the flight is the Commercial Float Zone Furnace to grow high-quality crystals of semiconductor materials for electronic devices, infrared detectors, faster computers and improved optical electronic devices. The SPACEHAB-4 investigation is being performed in cooperation with the Canadian Space Agency and the German Space Agency (DARA).

The crew also will conduct and oversee a variety of secondary experiments in the fields of technology demonstration, protein crystal growth and biological processes.

More than 90 percent of the payloads on the mission are sponsored by NASA's Office of Space Access and Technology through its Commercial Space Centers and their industrial affiliates.

Crew members are Mission Commander John H. Casper; Pilot Curtis L. Brown Jr; Mission Specialist Andrew S.W. Thomas, serving as payload commander; Mission Specialists Daniel W. Bursch and Mario Runco Jr.; and Mission Specialist Marc Garneau from the Canadian Space Agency.

Astronauts...

(Continued from Page 1)

After completing his master's degree at the University of Central Florida he was encouraged by Safety and Mission Assurance Director JoAnn Morgan and co-workers to apply for the astronaut corps. In his spare time Caldeiro and his wife Donna enjoy traveling in the two-seat composite airplane he built himself.

Higginbotham began working for NASA in 1987 as a payload electrical engineer. Within six months she became the lead for orbiter experiments on the Space Shuttle Columbia.

In August, she will add a master's degree in space sys-



John F. Kennedy Space Center

Spaceport News

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